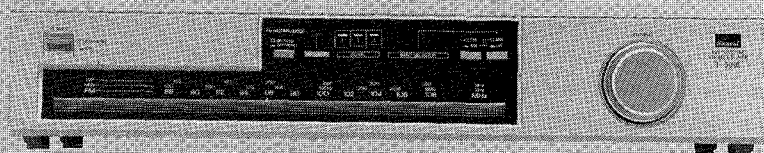


SERVICE MANUAL

AM/FM STEREO TUNER SANSUI T-500/500L (Silver & Black Model)



CAUTION

1. Parts identified by the Δ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

T-500

| | |
|--|---|
| FM Section | |
| Tuning range | 88 to 108 MHz |
| Usable sensitivity | |
| Mono IHF | 10.8 dBf (1.9 μ V: T-100) |
| DIN | 0.9 μ V |
| 50 dB quieting sensitivity | |
| Mono | 17.0 dBf |
| Stereo | 37.0 dBf |
| Signal to noise ratio at 65 dBf | |
| Mono | 75 dB |
| Stereo | 70 dB |
| Distortion at 65 dBf | |
| Mono | Less than 0.15% at 1,000 Hz |
| Stereo | Less than 0.2% at 1,000 Hz |
| Alternate channel selectivity (at 400 kHz) | 55 dB |
| Stereo separation | 40 dB at 1,000 Hz |
| Frequency response | 30 to 15,000 Hz +1.0 dB, -1.5 dB |
| Antenna input impedance | 300 ohms balanced 75 ohms unbalanced |

AM Section

| | |
|-----------------------------------|-------------------------|
| Tuning range | 530 to 1,600 kHz |
| Usable sensitivity (Loop antenna) | 52 dB/m (398 μ V/m) |
| Signal to noise ratio | 50 dB |
| Image response ratio | 40 dB at 1,000 kHz |

Others

| | |
|------------------------------|--|
| Output voltage and impedance | 0.6V/2.2 kohms |
| Power requirements | 120/220/240V (50/60 Hz) |
| For U.S.A. and Canada | 120V (60 Hz) |
| Power consumption | 8 watts |
| Dimensions | 430 mm (16-15/16") W 78 mm (3-1/8") H 233 mm (9-3/16") D |
| Weight | 2.5 kg (5.5 lbs.) net 3.2 kg (7.1 lbs.) packed |

T-500L

| | |
|--|---|
| FM Section | |
| Tuning range | 88 to 108 MHz |
| Usable sensitivity | |
| Mono IHF | 10.8 dBf (1.9 μ V: T-100) |
| DIN | 0.9 μ V |
| 50 dB quieting sensitivity | |
| Mono | 17.0 dBf |
| Stereo | 37.0 dBf |
| Signal to noise ratio at 65 dBf | |
| Mono | 75 dB |
| Stereo | 70 dB |
| Distortion at 65 dBf | |
| Mono | Less than 0.15% at 1,000 Hz |
| Stereo | Less than 0.2% at 1,000 Hz |
| Alternate channel selectivity (at 400 kHz) | 55 dB |
| Stereo separation | 40 dB at 1,000 Hz |
| Frequency response | 30 to 15,000 Hz +1.0 dB, -1.5 dB |
| Antenna input impedance | 300 ohms balanced 75 ohms unbalanced |

AM (MW, LW) Section

| | |
|-----------------------|--|
| Tuning range | MW: 530 to 1,600 kHz LW: 150 to 350 kHz |
| Usable sensitivity | MW: 52 dB/m (398 μ V/m) LW: 62 dB/m |
| Signal to noise ratio | 50 dB |
| Image response ratio | MW: 40 dB at 1,000 kHz LW: 40 dB at 250 kHz |

Others

| | |
|------------------------------|--|
| Output voltage and impedance | 0.6V/2.2 kohms |
| Power requirements | 220/240V (50/60 Hz) |
| Power consumption | 8 watts |
| Dimensions | 430 mm (16-15/16") W 78 mm (3-1/8") H 233 mm (9-3/16") D |
| Weight | 2.5 kg (5.5 lbs.) net 3.2 kg (7.1 lbs.) packed |

- * Design and specifications subject to changes without notice for improvements.
- * Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.

CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS, XX <EXPORT> and XX-V <EXPORT(V)> on the parts list and the schematic diagram mean followings respectively.

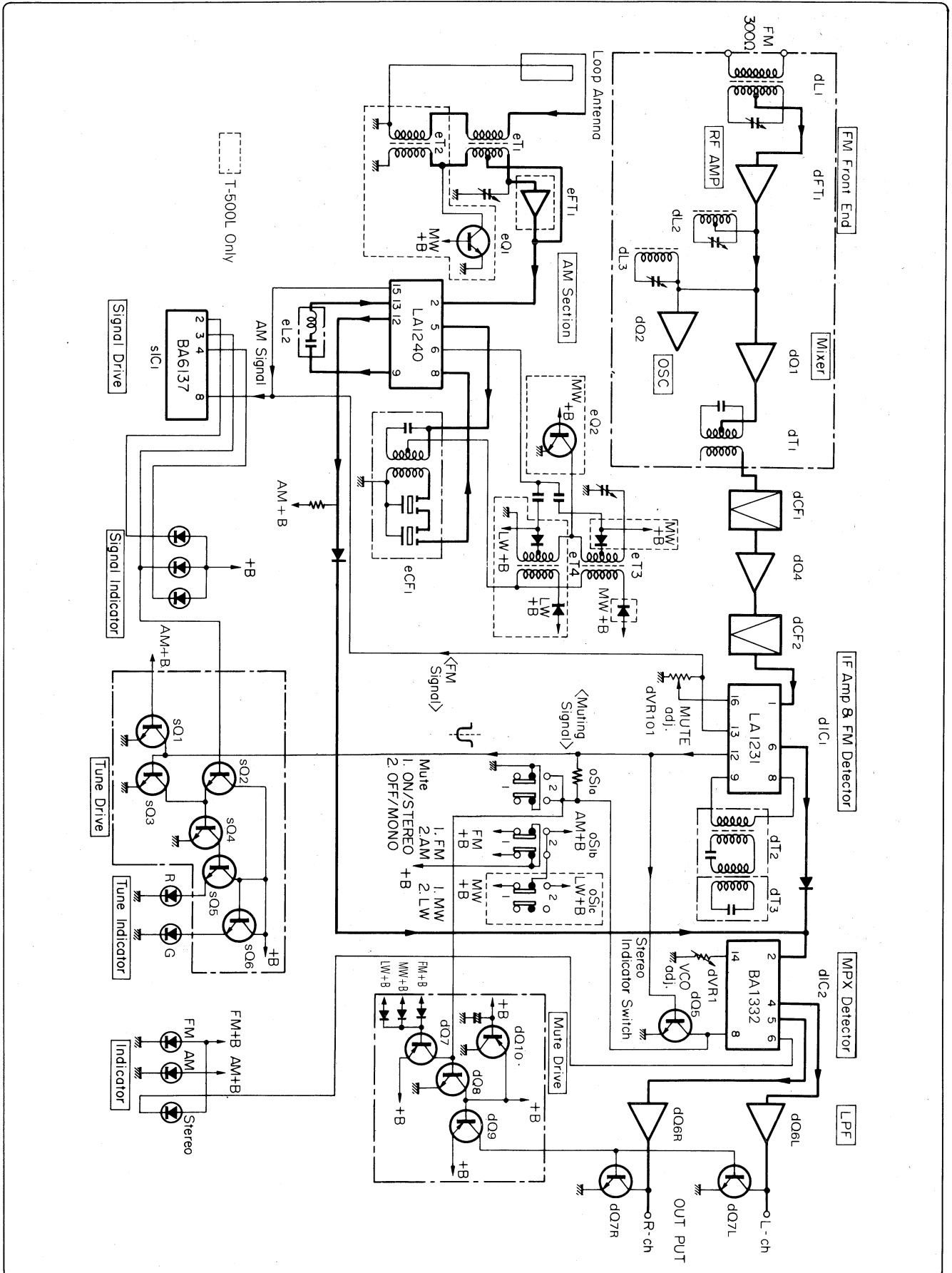
| | |
|-----------------------|---|
| UL..... | Manufactured for U.S.A market. (Underwriters Laboratories approved model.) |
| CSA | Manufactured for Canadian market. |
| SA..... | Manufactured for South African market. |
| BS, UK..... | Manufactured for United Kingdom market. |
| EU | Manufactured for European market. |
| AS..... | Manufactured for Australian market. |
| XX <EXPORT> | Standard Version with Inner Voltage Selector. |
| XX-V <EXPORT(V)> | Standard Version with Outer Voltage Selector. |
| NON MARK | Common Parts. |

2. Some printed circuit boards are not supplied as the assembled.
To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.
4. Abbreviations in this service manual are as follows.

•Abbreviations List

| | |
|---|----------------------------------|
| C.R. : Carbon Resistor | E.B.L. : Low Leak Bi-Polar |
| S.R. : Solid Resistor | Electrolytic Capacitor |
| Ce.R. : Cement Resistor | Ta.C. : Tantalum Capacitor |
| M.R. : Metal Film Resistor | F.C. : Film Capacitor |
| F.R. : Fusing Resistor | M.P. : Metalized Paper Capacitor |
| N.I.R. : Non-Inflammable Resistor | P.C. : Polystyrene Capacitor |
| A.R. : Array Resistor | G.C. : Gimmic Capacitor |
| C.C. : Ceramic Capacitor | A.C. : Array Capacitor |
| C.T. : Ceramic Capacitor, Temperature Compensation | V.R. : Variable Resistor |
| E.C. : Electrolytic Capacitor | S.V.R. : Semi Variable Resistor |
| E.L. : Low Leak Electrolytic Capacitor | SW. : Switch |
| E.B. : Bi-Polar Electrolytic Capacitor | Chip R. : Chip Resistor |
| | Chip C. : Chip Capacitor |

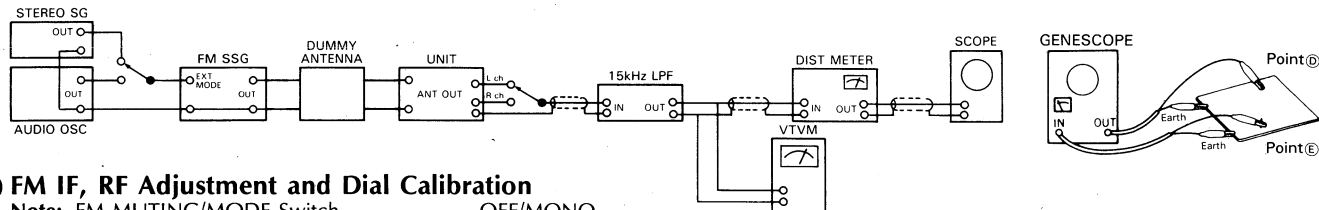
1. BLOCK DIAGRAM



2. ADJUSTMENTS

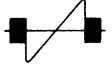
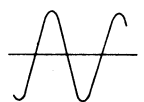
2-1. FM Adjustment (See Top View on Page 11)

Note: BAND SELECTOR..... FM



(1) FM IF, RF Adjustment and Dial Calibration

Note: FM MUTING/MODE Switch..... OFF/MONO

| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|------|--|---|----------------------|--|---------------------|--|--|
| | | FROM | TO | | | | |
| 1. | IF Coil Adj. | 98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG | ANT terminal 300Ω | Between Point (A) (dVR101) & Earth DC Volt Meter | dT1 (F-4852) | Max. DC Volt | |
| 2. | Discriminator Coil Adj. In case of using Genescope | 1 No Input | _____ | Between Point (B) & Point (C) (Pin No. 7 & 10 of dIC1) DC Volt Meter • See Parts Location F-4853 on Page 5 | dT2 (F-4853) | DC 0V ± 30mV |  |
| | | 2 Output 80dB, Genescope | Point (D) (dTC2) | Between Point (E) (Pin No. 6 of dIC1) & Earth • See Parts Location F-4853 on Page 5 | dT3 (F-4853) | Steep linearity of S curve. Make symmetrical S curve. | |
| | Discriminator Coil Adj. In case of using Dist meter | 1 No Input | _____ | Between Point (B) & Point (C) (Pin No. 7 & 10 of dIC1) DC Volt Meter • See Parts Location F-4853 on Page 5 | dT2 (F-4853) | DC 0V ± 30mV | <ul style="list-style-type: none"> • Repeat procedures as stated in subject 1 & 2. • Since the dT1 has already adjusted, perform only a fine adjustment in this procedure. |
| | | 2 98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG | ANT terminal 300Ω | OUTPUT L-CH or R-CH VTVM & SCOPE | dT3 (F-4853) | Min. THD | |
| 3. | 90MHz Dial Calibration | 90MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG | Same as above | Dial Pointer | Tuning Knob | 90MHz | <ul style="list-style-type: none"> • Repeat procedures as stated in step 3 & 4. |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | dL3 (F-4852) | Max. Output | |
| 4. | 106MHz Dial Calibration | 106MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG | Same as above | Dial Pointer | Tuning Knob | 106MHz | |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | dTC3 (F-4852) | Max. Output | |
| 5. | 90MHz RF Adj. | 90MHz ANT Input 16dBf (10.8dB) 1000Hz (100% MOD.), FM SSG | Same as above | OUTPUT L-CH or R-CH VTVM & SCOPE | dL1, dL2 (F-4852) | Max. Output |  |
| 6. | 106MHz RF Adj. | 106MHz ANT Input 16dBf (10.8dB) 1000Hz (100% MOD.), FM SSG | Same as above | Same as above | dTC1, dTC2 (F-4852) | Max. Output | |

(2) FM STEREO Adjustment

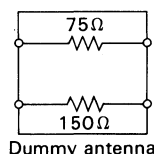
Note: FM Mode..... AUTO

| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|------|-------------------------------------|--|-------------------|---|-----------------|--|---|
| | | FROM | TO | | | | |
| 1. | PLL VCO Adj. | 98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), R or L MODE 1kHz + Pilot (100% MOD.), STEREO SG | ANT terminal 300Ω | Stereo indicator | dVR1 (F-4854) | Light indicator | Adjust the VR within center of lighting level |
| | PLL VCO Adj. In case of using Freq. | 98MHz ANT Input 65dBf (59.8dB), FM SSG, No MOD. | Same as above | Between PointⓈ (dR44) & Earth Freq. counter •See Parts Location F-4854 on Page 5 | dVR1 (F-4854) | 19kHz ± 25Hz | |
| 2. | Muting level Adj. | 98MHz ANT Input 22dBf (16.8dB), FM SSG, Pilot 19kHz (9% MOD.), L or R MODE 1kHz + Pilot (100% MOD.) STEREO SG. | Same as above | Stereo indicator or OUTPUT L-CH or R-CH VTVM & SCOPE | dVR101 (F-4935) | Stereo indicator turns ON or Output Signal comes out | |

◆ ADJUSTMENT FOR FM

- There are two kind in indication of FM SSG output attenuator
 - Attenuator with marking of 75Ω open..... open indication type.
 - Attenuator with marking of 75Ω load or close..... load or close indication type.
- FM SG output level in this FM adjustment are described as open indication type.
- To feed FM signal, a dummy antenna circuit as Fig. 2-1 must be connected between FM SG output and ANT terminal (300Ω) of the unit.

Fig. 2-1



- The following table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

| | FM SG Attenuator Indication | Available Power Ratio | Antenna Terminal Voltage |
|-------------------------------|-----------------------------|-----------------------|--------------------------|
| Open indication type | 0 dB 66 dB | −0.8 dBf 65.2 dBf | −6 dB/μV 60 dB/μV |
| Load or close indication type | 0 dB 60 dB | 5.2 dBf 65.2 dBf | 0 dB/μV 60 dB/μV |

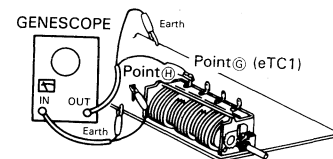
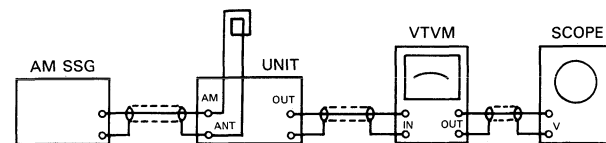
•Abbreviations

Equipment
 AM FM Generator Oscilloscope..... Genescope
 AM Standard Signal Generator..... AM SSG
 FM Standard Signal Generator..... FM SSG
 FM Stereo Generator..... Stereo SG
 Oscilloscope..... Scope
 Audio Oscillator..... Audio Osc.
 Distortion Meter..... Dist. Meter

Others
 Antenna..... ANT.
 Modulation..... MOD.
 Total Harmonic Distortion..... T.H.D.

2-2. AM Adjustment (See Top View on Page 11)

- Note: 1. BAND SELECTOR..... AM
 2. Connet the AM Loop antenna to the AM antenna terminal and GND terminal.

**(1) AM IF Adjustment & MW AM Dial Calibration**

Note: BAND SELECTOR..... MW

| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|------|--------------------------|--|---------------|--|--|----------------|---------|
| | | FROM | TO | | | | |
| 1. | IF Coil Adj. | Genescope Output 60dB | PointⓈ (eTC1) | PointⓈ (Pin No.12 of eIC1) •See Parts Location F-4856 on Page 6 | eCF1 eL2 (F-4856) | Max. Wave form | |
| 2. | 600kHz Dial Calibration | 600kHz ANT Input 60dB 400Hz (30% MOD.) AM SSG | ANT terminal | Dial Pointer | Tuning Knob | 600kHz | |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | eT3 (F-4855 or F-4935 for T-500) (F-4933 for T-500L) | Max. Output | |
| 3. | 1400kHz Dial Calibration | 1400kHz ANT Input 60dB 400Hz (30% MOD.) AM SSG | Same as above | Dial Pointer | Tuning Knob | 1400kHz | |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | eTC2 (F-4852) | Max. Output | |
| 4. | 600kHz RF Adj. | 600kHz ANT Input 40dB 400Hz (30% MOD.) AM SSG | Same as above | OUTPUT L-CH or R-CH VTVM & SCOPE | eT1 (F-4855 or F-4935 for T-500) (F-4933 for T-500L) | Max. Output | |
| 5. | 1400kHz RF Adj. | 1400kHz ANT Input 40dB 400Hz (30% MOD.) AM SSG | Same as above | OUTPUT L-CH or R-CH VTVM & SCOPE | eTC1 (F-4852) | Max. Output | |

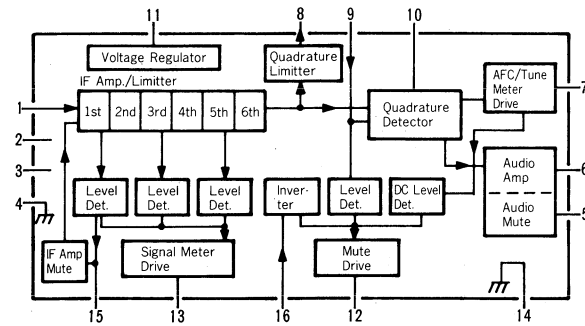
(2) LW Dial Calibration (T-500L Only)

Note: BAND SELECTOR..... LW

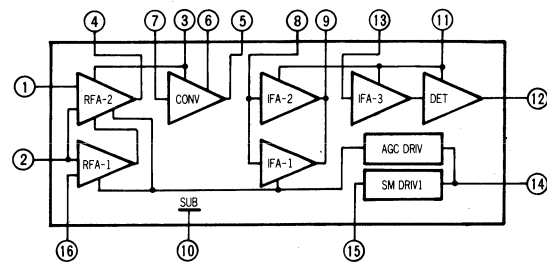
| STEP | SUBJECT | FEED SIGNAL | | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|------|-------------------------|---|---------------|----------------------------------|---------------|-------------|---------|
| | | FROM | TO | | | | |
| 1. | 170kHz Dial Calibration | 170kHz ANT Input 60dB 400Hz (30% MOD.) AM SSG | ANT terminal | Dial Pointer | Tuning Knob | 170kHz | |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | eT4 (F-4933) | Max. Output | |
| 2. | 300kHz Dial Calibration | 300kHz ANT Input 60dB 400Hz (30% MOD.) AM SSG | Same as above | Dial Pointer | Tuning Knob | 300kHz | |
| | | | | OUTPUT L-CH or R-CH VTVM & SCOPE | eTC4 (F-4933) | Max. Output | |
| 3. | 170kHz RF Adj. | 170kHz ANT Input 40dB 400Hz (30% MOD.) AM SSG | Same as above | OUTPUT L-CH or R-CH VTVM & SCOPE | eT2 (F-4933) | Max. Output | |
| 4. | 300kHz RF Adj. | 300kHz ANT Input 40dB 400Hz (30% MOD.) AM SSG | Same as above | OUTPUT L-CH or R-CH VTVM & SCOPE | eTC3 (F-4933) | Max. Output | |

3. INTERIOR BLOCK DIAGRAM OF IC

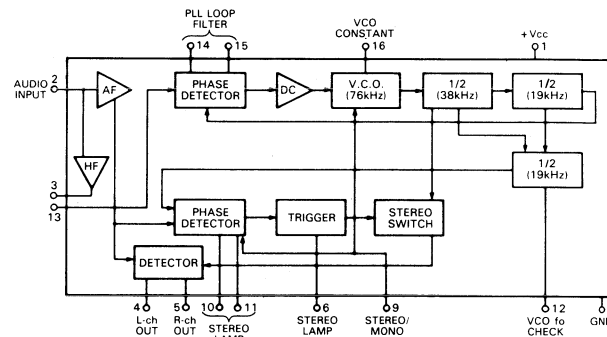
•LA1231N (IF & Quadrature Detector IC)



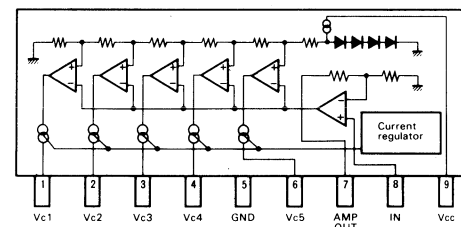
•LA1240 (AM Tuner IC)



•BA1332 (MPX IC)



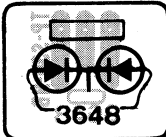
•BA6137 (LED Drive IC)



4. PARTS LOCATION & PARTS LIST

4-1. F-3648 Dial Pointer LED Board

Component Side

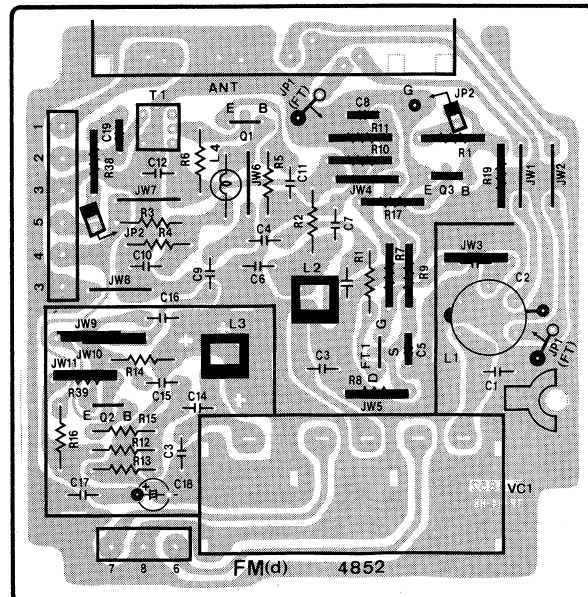


Parts List

| Parts No. | Stock No. | Description |
|--------------|-----------|------------------------|
| •LED sLD1 | 46198900 | SLP-520D, Dial Pointer |

4-2. F-4852 FM•AM RF Board (Stock No. 00868704 for SA model, Stock No. 00868701 for others)

Component Side

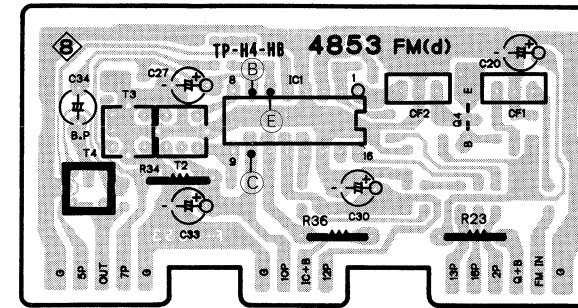


Parts List

| Parts No. | Stock No. | Description |
|--------------------|-------------|-----------------------------|
| •Transistor dQ1 | 46393201 | 2SC2786 |
| | or 46426701 | 2SC2999SPA |
| dQ2 | 46393101 | 2SC2839SPA |
| •FET dFT1 | 46393000 | 2SK192A-Y |
| | or 46393001 | 2SK192A-GR |
| ΔdR2 | 46229000 | 100Ω 1/2W N.I.R. |
| dVC1 | 46369700 | Variable Capacitor CR51J519 |
| dL1 | 42007200 | FM RF Coil |
| dL2 | 48182100 | FM RF Coil |
| dL3 | 48182300 | FM RF Coil |
| | 48182400 | (XX,XX-V,CSA,EU,BS,AS) |
| dL4 | 48070300 | Inductor |
| dT1 | 46369500 | FM IF Coil |
| oZ1 | 46547300 | 4P Terminal Board, ANTENNA |

4-3. F-4853 FM IF Amp. Board (Stock No. 00868801)

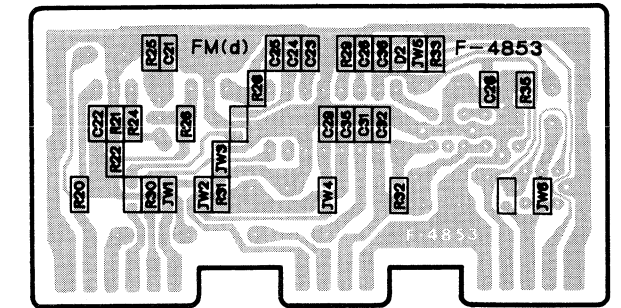
Component Side



Parts List

| Parts No. | Stock No. | Description |
|--------------------|-----------|------------------------|
| •Transistor dQ4 | 46393201 | 2SC2786 |
| •IC dIC1 | 07191200 | LA1231N |
| •Diode dD2 | 46852000 | RLS-73 (Chip) |
| dJW1 ~ 6 | 46741100 | Cross Conductor (Chip) |
| dR20 | 46745800 | 180Ω 1/8W Chip R. |
| dR21 | 46747000 | 560Ω 1/8W Chip R. |
| dR22 | 46747600 | 1kΩ 1/8W Chip R. |
| ΔdR23 | 46229000 | 100Ω 1/2W N.I.R. |
| dR24 | 46745200 | 100Ω 1/8W Chip R. |
| dR25 | 46747400 | 820Ω 1/8W Chip R. |
| dR26 | 46746600 | 390Ω 1/8W Chip R. |
| dR28 | 46746400 | 330Ω 1/8W Chip R. |
| dR29 | 46752400 | 100kΩ 1/8W Chip R. |
| dR30 | 46750000 | 10kΩ 1/8W Chip R. |
| dR31 | 46751600 | 47kΩ 1/8W Chip R. |

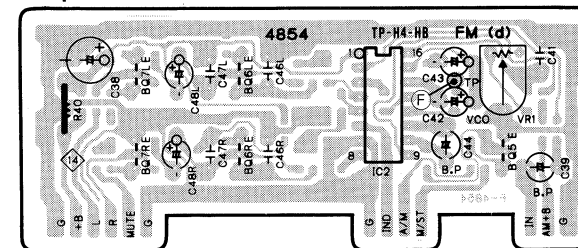
Pattern Side <Chip Parts>



| Parts No. | Stock No. | Description |
|-----------|-----------|---------------------|
| dR32 | 46750400 | 15kΩ 1/8W Chip R. |
| dR33 | 46752400 | 100kΩ 1/8W Chip R. |
| dR35 | 46748800 | 3.3kΩ 1/8W Chip R. |
| ΔdR36 | 46229000 | 100Ω 1/2W N.I.R. |
| dC21 | 46854500 | 0.022μF 50V Chip C. |
| dC22 | 46854900 | 0.047μF 50V Chip C. |
| dC23 | 46854900 | 0.047μF 50V Chip C. |
| dC24 | 46854900 | 0.047μF 50V Chip C. |
| dC25 | 46854900 | 0.047μF 50V Chip C. |
| dC26 | 46778100 | 100pF 50V Chip C. |
| dC28 | 46854500 | 0.022μF 50V Chip C. |
| dC29 | 46854500 | 0.022μF 50V Chip C. |
| dC31 | 46854900 | 0.047μF 50V Chip C. |
| dC32 | 46854900 | 0.047μF 50V Chip C. |
| dC34 | 48102400 | 4.7μF 25V E.B. |
| dCF1 | 09106410 | Ceramic Filter |
| dCF2 | 09106410 | Ceramic Filter |
| dT2 | 48072100 | FM IF Coil |
| dT3 | 48072200 | FM IF Coil |

4-4. F-4854 FM MPX Board (Stock No. 00868901)

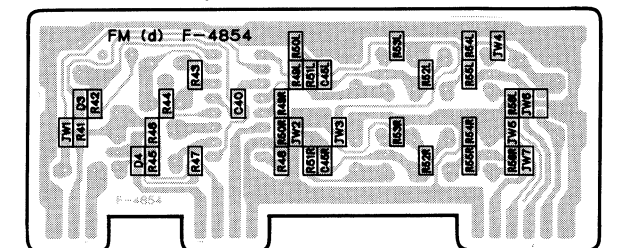
Component Side



Parts List

| Parts No. | Stock No. | Description |
|--------------------|-------------|------------------------|
| •Transistor dQ5 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| dQ6 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| dQ7 | 46540801 | 2SC2878 |
| •IC dIC2 | 48169300 | BA1332 |
| •Diode dD3 | 46852000 | RLS-73 (Chip) |
| dD4 | 46852000 | RLS-73 (Chip) |
| dJW1 ~ 7 | 46741100 | Cross Conductor (Chip) |
| ΔdR40 | 46228200 | 22Ω 1/2W N.I.R. |
| dR41 | 46751200 | 33kΩ 1/8W Chip R. |
| dR42 | 46749800 | 8.2kΩ 1/8W Chip R. |
| dR43 | 46747600 | 1kΩ 1/8W Chip R. |

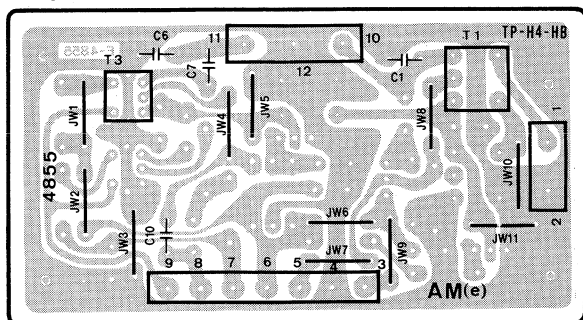
Pattern Side <Chip Parts>



| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------------|
| dR44 | 46750000 | 10kΩ 1/8W Chip R. |
| dR45 | 46750000 | 10kΩ 1/8W Chip R. |
| dR46 | 46749200 | 4.7kΩ 1/8W Chip R. |
| dR47 | 46751600 | 47kΩ 1/8W Chip R. |
| dR48 | 46747400 | 820Ω 1/8W Chip R. |
| dR49 | 46749200 | 4.7kΩ 1/8W Chip R. |
| dR50 | 46748800 | 3.3kΩ 1/8W Chip R. |
| dR51 | 46747600 | 1kΩ 1/8W Chip R. |
| dR52 | 46747200 | 680Ω 1/8W Chip R. |
| dR53 | 46745400 | 120Ω 1/8W Chip R. |
| dR54 | 46752000 | 68kΩ 1/8W Chip R. |
| dR55 | 46747800 | 1.2kΩ 1/8W Chip R. |
| dR56 | 46748800 | 3.3kΩ 1/8W Chip R. |
| dC39 | 48102400 | 4.7μF 25V E.B. |
| dC40 | 46854900 | 0.047μF 50V Chip C. |
| dC44 | 48103400 | 1μF 50V E.B. |
| dC45 | 46778300 | 120pF 50V Chip C. |
| dC46 | 46283100 | 0.015μF 50V F.C. |
| dC47 | 46282800 | 8200pF 50V F.C. |
| dVR1 | 07241200 | 5kΩ (B) S.V.R., PLL VCO Adj. |

4-5. F-4855 AM RF Board (Only for T-500 XX & XX-V models)

Component Side

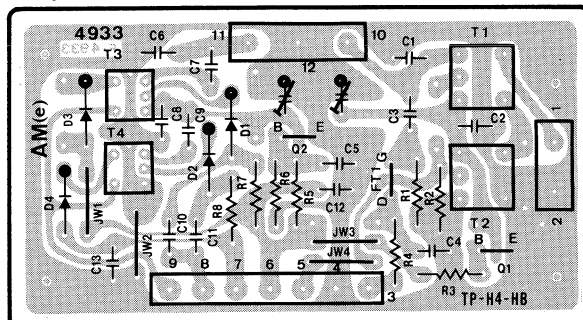


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------|
| eT1 | 48178000 | AM Antenna Coil |
| eT3 | 46369300 | AM OSC Coil |

4-6. F-4933 MW•LW RF Board (Only for T-500L)

Component Side

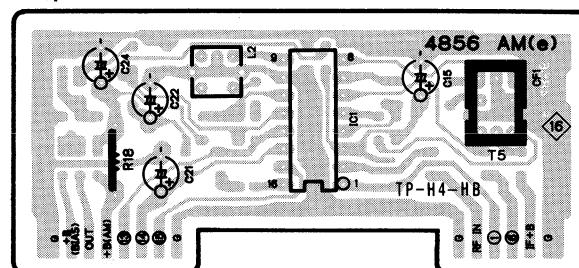


Parts List

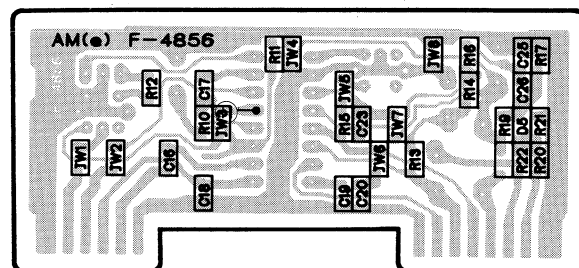
| Parts No. | Stock No. | Description |
|--------------------|-------------|------------------------|
| •Transistor | | |
| eQ1 | 46540801 | 2SC2878 |
| eQ2 | 46540801 | 2SC2878 |
| eFT1 | 46393000 | 2SK192A-Y |
| | or 46393001 | 2SK192A-GR |
| •Diode | | |
| eD1 | 46086000 | 1S1588TP-3 |
| | or 03117600 | 1S2473T77 |
| eD2 | 46086000 | 1S1588TP-3 |
| | or 03117600 | 1S2473T77 |
| eD3 | 46086000 | 1S1588TP-3 |
| | or 03117600 | 1S2473T77 |
| eD4 | 46086000 | 1S1588TP-3 |
| | or 03117600 | 1S2473T77 |
| eTC3 | 46162800 | 20pF Trimmer Capacitor |
| | or 46437400 | 20pF Trimmer Capacitor |
| eTC4 | 46162800 | 20pF Trimmer Capacitor |
| | or 46437400 | 20pF Trimmer Capacitor |
| eT1 | 48178000 | MW Antenna Coil |
| eT2 | 48178100 | LW Antenna Coil |
| eT3 | 46369300 | MW OSC Coil |
| eT4 | 46369400 | LW OSC Coil |

4-7. F-4856 AM IF Amp. Board (Stock No. 00869101)

Component Side



Pattern Side <Chip Parts>

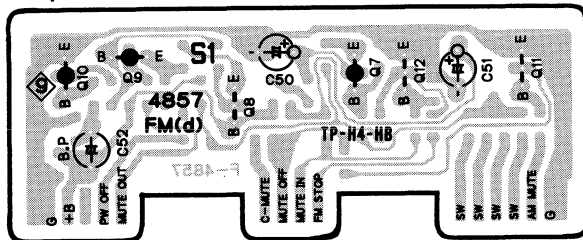


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|---------------------------------|
| •IC | | |
| eIC1 | 03608000 | LA1240 |
| •Diode | | |
| eD5 | 46852000 | RLS-73 (Chip) |
| eJW1 ~ 9 | 46741100 | Cross Conductor (Chip) |
| eR10 | 46748000 | 1.5k Ω 1/8W Chip R. |
| eR11 | 46745200 | 100 Ω 1/8W Chip R. |
| eR12 | 46744400 | 47 Ω 1/8W Chip R. |
| eR13 | 46750000 | 10k Ω 1/8W Chip R. |
| eR14 | 46750000 | 10k Ω 1/8W Chip R. |
| eR15 | 46745200 | 100 Ω 1/8W Chip R. |
| eR16 | 46747600 | 1k Ω 1/8W Chip R. |
| eR17 | 46752400 | 100k Ω 1/8W Chip R. |
| △eR18 | 46229000 | 100 Ω 1/2W N.I.R. |
| eR19 | 46751800 | 56k Ω 1/8W Chip R. |
| eR20 | 46754400 | 680k Ω 1/8W Chip R. |
| eR21 | 46753200 | 220k Ω 1/8W Chip R. |
| eR22 | 46751200 | 33k Ω 1/8W Chip R. |
| eC16 | 46854500 | 0.022 μ F 50V Chip C. |
| eC17 | 46854500 | 0.022 μ F 50V Chip C. |
| eC18 | 46794300 | 1000pF 50V Chip C. |
| eC19 | 46854500 | 0.022 μ 50V Chip C. |
| eC20 | 46794300 | 1000pF 50V Chip C. |
| eC23 | 46795500 | 0.01 μ F 50V Chip C. |
| eC25 | 46794300 | 1000pF 50V Chip C. |
| eC26 | 46854900 | 0.047 μ F 50V Chip C. |
| eCF1 | 48177700 | Ceramic Filter CFLZ455 (T-500) |
| | 48177900 | Ceramic Filter CFLZ455 (T-500L) |
| eL22 | 46369600 | AM IF Coil |
| eT5 | 48177800 | AM IFT (T-500L) |

4-8. F-4857 FM Muting Board (Stock No. 00869201)

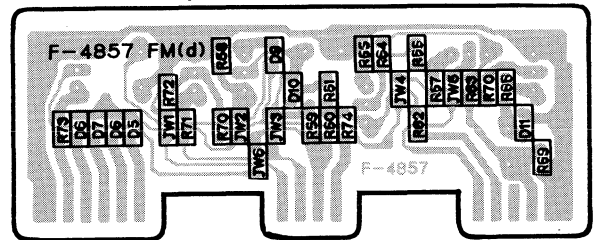
Component Side



Parts List

| Parts No. | Stock No. | Description |
|-------------|-------------|---------------|
| •Transistor | | |
| dQ7 | 46367001 | 2SA1115 |
| | or 46367201 | 2SA1048 |
| | or 46392001 | 2SA1175 |
| dQ8 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| dQ9 | 46367001 | 2SA1115 |
| | or 46367201 | 2SA1048 |
| | or 46392001 | 2SA1175 |
| dQ10 | 46367001 | 2SA1115 |
| | or 46367201 | 2SA1048 |
| | or 46392001 | 2SA1175 |
| •Diode | | |
| dD5 | 46852000 | RLS-73 (Chip) |
| dD6 | 46852000 | RLS-73 (Chip) |
| dD7 | 46852000 | RLS-73 (Chip) |
| dD9 | 46852000 | RLS-73 (Chip) |

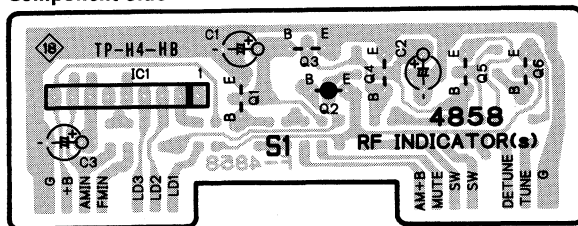
Pattern Side <Chip Parts>



| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| dD10 | 46852000 | RLS-73 (Chip) |
| dD11 | 46852000 | RLS-73 (Chip) |
| dJW1~6 | 46741100 | Cross Conductor (Chip) |
| dR58 | 46751600 | 47k Ω 1/8W Chip R. |
| dR59 | 46750000 | 10k Ω 1/8W Chip R. |
| dR60 | 46750000 | 10k Ω 1/8W Chip R. |
| dR61 | 46750800 | 22k Ω 1/8W Chip R. |
| dR62 | 46750800 | 22k Ω 1/8W Chip R. |
| dR63 | 46750800 | 22k Ω 1/8W Chip R. |
| dR64 | 46750800 | 22k Ω 1/8W Chip R. |
| dR65 | 46745200 | 100 Ω 1/8W Chip R. |
| dR66 | 46748800 | 3.3k Ω 1/8W Chip R. |
| dR67 | 46747000 | 560 Ω 1/8W Chip R. |
| dR68 | 46750000 | 10k Ω 1/8W Chip R. |
| dR69 | 46751600 | 47k Ω 1/8W Chip R. |
| dR70 | 46750200 | 12k Ω 1/8W Chip R. |
| dC52 | 48103400 | 1 μ F 50V E.B. |

4-9. F-4858 Indicator Control Board (Stock No. 00869301)

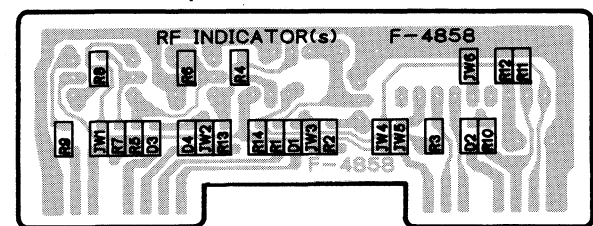
Component Side



Parts List

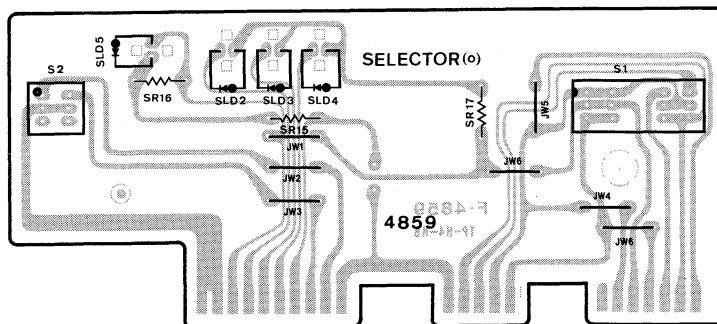
| Parts No. | Stock No. | Description |
|-------------|-------------|-------------|
| •Transistor | | |
| sQ1 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| sQ2 | 46367001 | 2SA1115 |
| | or 46367201 | 2SA1048 |
| | or 46392001 | 2SA1175 |
| sQ3 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| sQ4 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| sQ5 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| sQ6 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| | or 46391901 | 2SC2785 |
| •IC | | |
| sIC1 | 46197200 | BA6137 |

Pattern Side <Chip Parts>



4-10. F-4859 Selector Board for T-500

Component Side



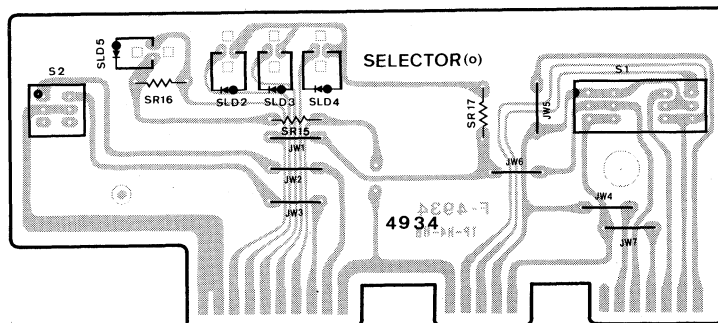
Parts List

| Parts No. | Stock No. | Description |
|--------------|-----------|--------------------------|
| oS1 | 48169600 | Push SW., BAND SELECTOR |
| oS2 | 48169400 | Push SW., FM MUTING/MODE |
| •LED sLD2 | 48185200 | GL-3NG87, SIGNAL 1 |

| Parts No. | Stock No. | Description |
|-----------|-------------------------|-------------------------------------|
| sLD3 | 48185200 | GL-3NG87, SIGNAL 2 |
| sLD4 | 48185200 | GL-3NG87, SIGNAL 3 |
| sLD5 | 46176900 or 46470200 | TLS-123, STEREO SEL2210S, STEREO |

4-11. F-4934 Selector Board for T-500L

Component Side



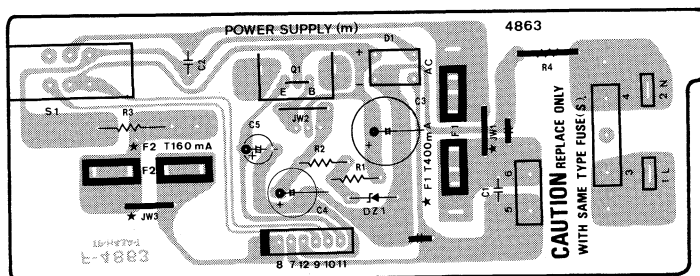
Parts List

| Parts No. | Stock No. | Description |
|--------------|-----------|--------------------------|
| oS1 | 48169600 | Push SW., BAND SELECTOR |
| oS2 | 48169400 | Push SW., FM MUTING/MODE |
| •LED sLD2 | 48185200 | GL-3NG87, SIGNAL 1 |

| Parts No. | Stock No. | Description |
|-----------|-------------------------|-------------------------------------|
| sLD3 | 48185200 | GL-3NG87, SIGNAL 2 |
| sLD4 | 48185200 | GL-3NG87, SIGNAL 3 |
| sLD5 | 46176900 or 46470200 | TLS-123, STEREO SEL2210S, STEREO |

4-12. F-4863 Power Supply Board (Stock No. 00869501)

Component Side



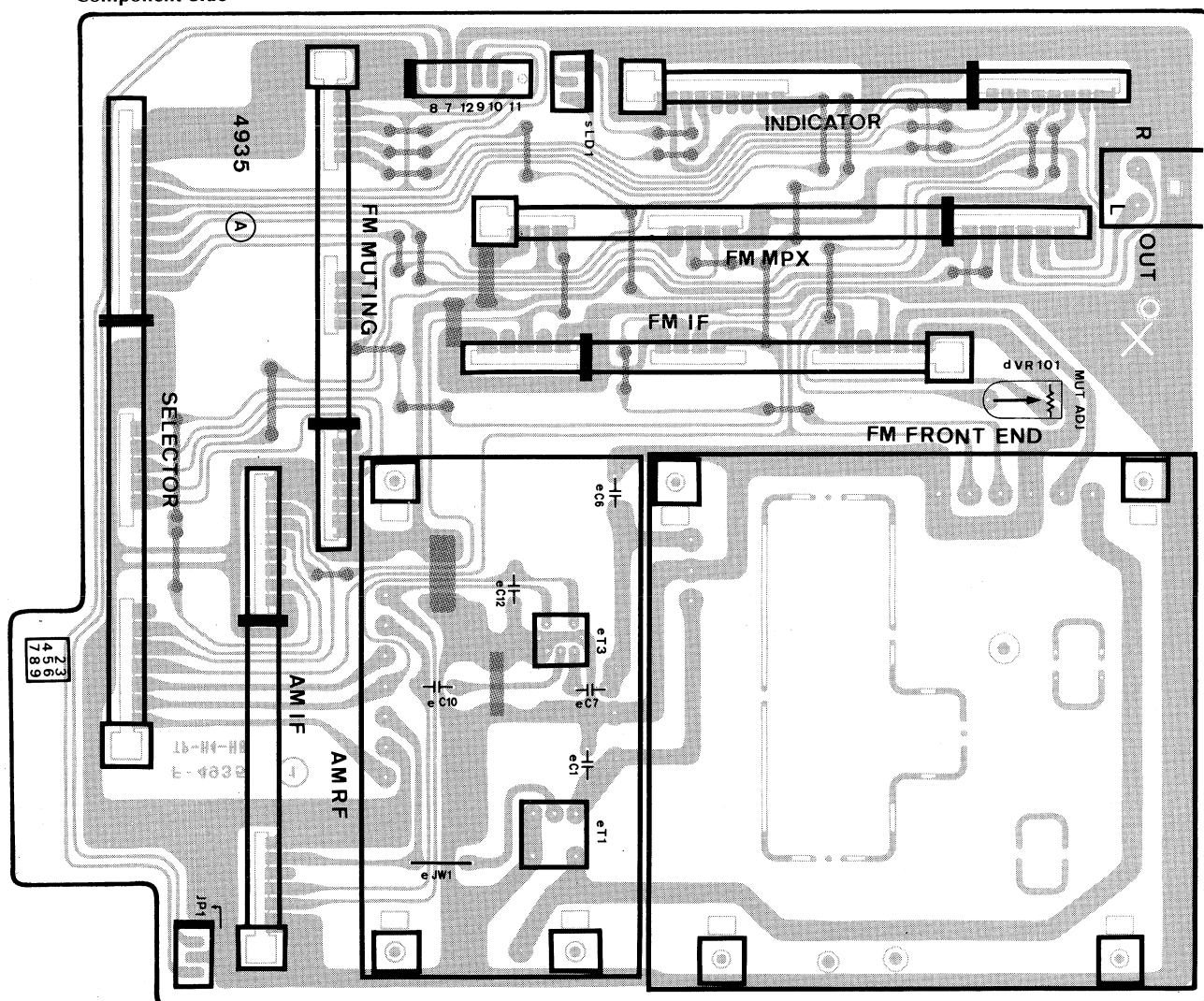
Parts List

| Parts No. | Stock No. | Description |
|--------------------------|-------------------------|--------------------|
| •Transistor ΔmQ1 Δ | 03083901 or 46546701 | 2SD313AL 2SD880 |
| •Diode ΔmD1 | 46273600 | DBB10-B |

| Parts No. | Stock No. | Description |
|----------------------|-----------|----------------------|
| •Zener Diode mDZ1 | 46104200 | 05Z15-X |
| ΔmR3 | 00190100 | 47Ω 2W N.I.R. |
| ΔmF1 | 07184300 | 400mA 250V Fuse (BS) |
| ΔmS1 | 48181900 | Push SW., POWER |

4-13. F-4935 Main Wiring Board (Only for unit with F-4855 board)

Component Side

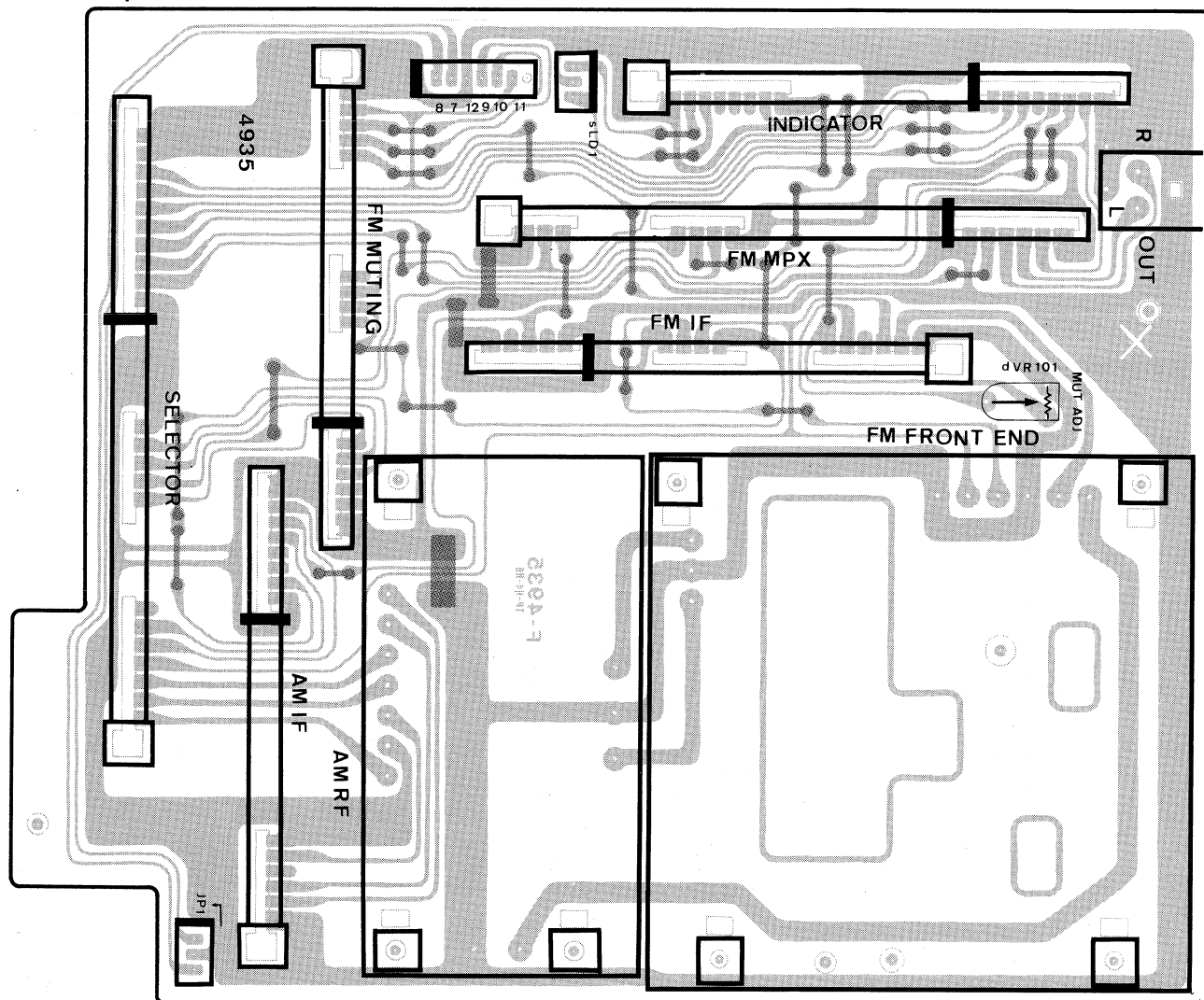


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|---|
| dVR101 | 07241300 | 10k Ω (B) S.V.R., FM Muting Adj. |
| oZ2 | 46438100 | 2P Terminal Board, OUTPUT |

4-14. F-4935 Main Wiring Board (Only for unit without F-4855 board)

Component Side

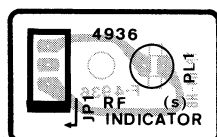


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|---|
| dVR101 | 07241300 | 10k Ω (B) S.V.R., FM Muting Adj. |
| eT1 | 48178000 | MW ANT Coil (T-500) |
| eT3 | 46369300 | AM RF Coil (T-500) |
| oZ2 | 46438100 | 2P Terminal Board, OUTPUT |

4-15. F-4936 Dial Illumination Lamp Board

Component Side

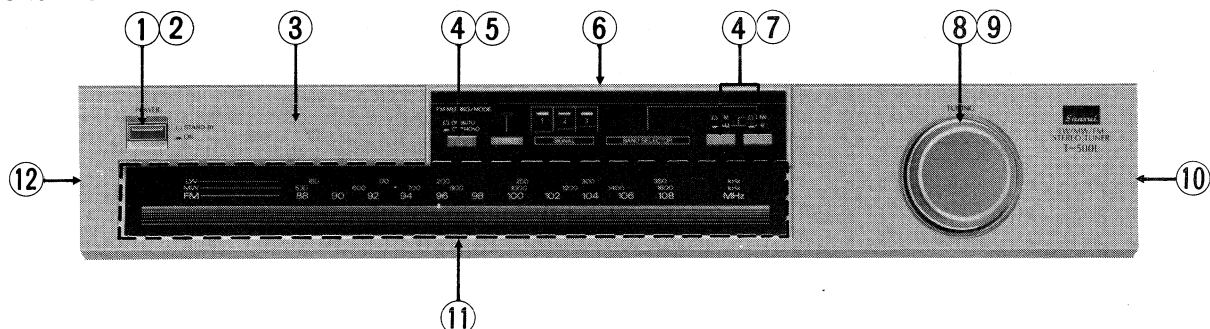


Parts List

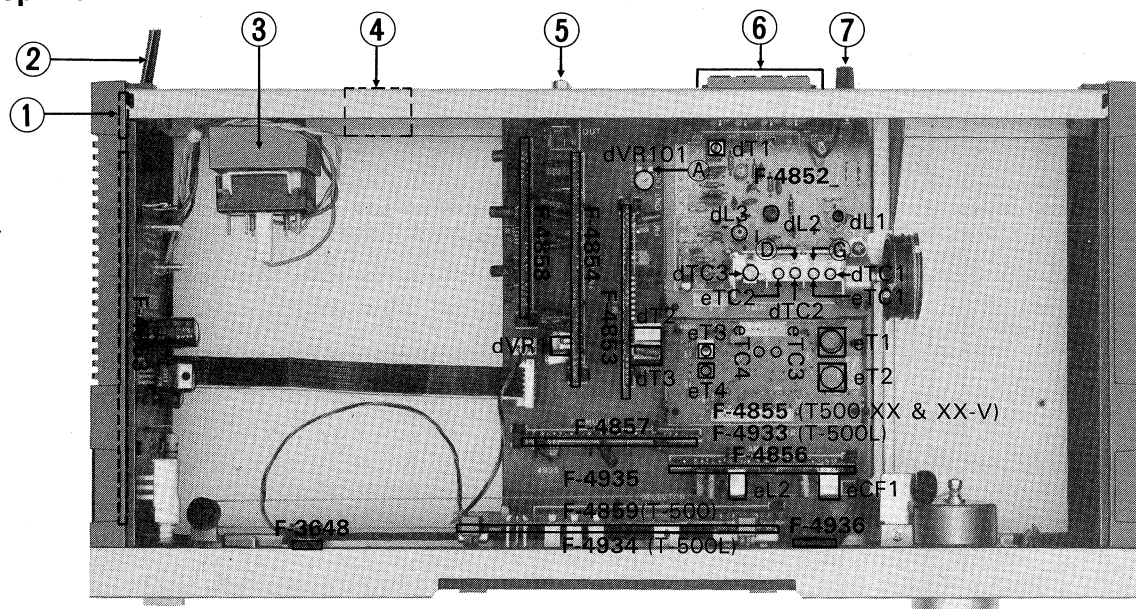
| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------|
| sPL1 | 48191900 | 12V 0.15A Pilot Lamp |

5. OTHER PARTS

5-1. Front View



5-2. Top View



Parts List < Front View >

| Parts No. | Stock No. | Description |
|-----------|-----------|--|
| 1 | 47747000 | Knob, POWER (Silver Model) |
| | 47747100 | Knob, POWER (Black Model) |
| △ 2 | 48181900 | Push SW., POWER |
| 3 | 47845300 | Front Panel Ass'y (T-500 Silver Model) |
| | 47845400 | Front Panel Ass'y (T-500 Black Model) |
| | 47845500 | Front Panel Ass'y (T-500L Silver Model) |
| | 47845600 | Front Panel Ass'y (T-500L Black Model) |
| 4 | 47747200 | Knob, FM MUTING/MODE, AM, FM, FM/AM, MW/LW |
| 5 | 48169400 | Push SW., FM MUTING/MODE |
| 6 | 47854700 | Bonnet (Silver Model) |
| | 47872700 | Bonnet (Black Model) |
| 7 | 48169500 | Push SW., AM, FM (T-500) |
| | 48169600 | Push SW., FM/AM, MW/LW (T-500L) |
| 8 | 47758400 | Knob, TUNING (Silver Model) |
| | 47783800 | Knob, TUNING (Black Model) |
| 9 | 47764800 | Tuning Unit |
| 10 | 47873000 | Right Side Panel Ass'y (Silver Model) |
| | 47873100 | Right Side Panel Ass'y (Black Model) |
| 11 | 47758900 | Dial Scale (T-500 XX, XX-V, UL, CSA, AS) |

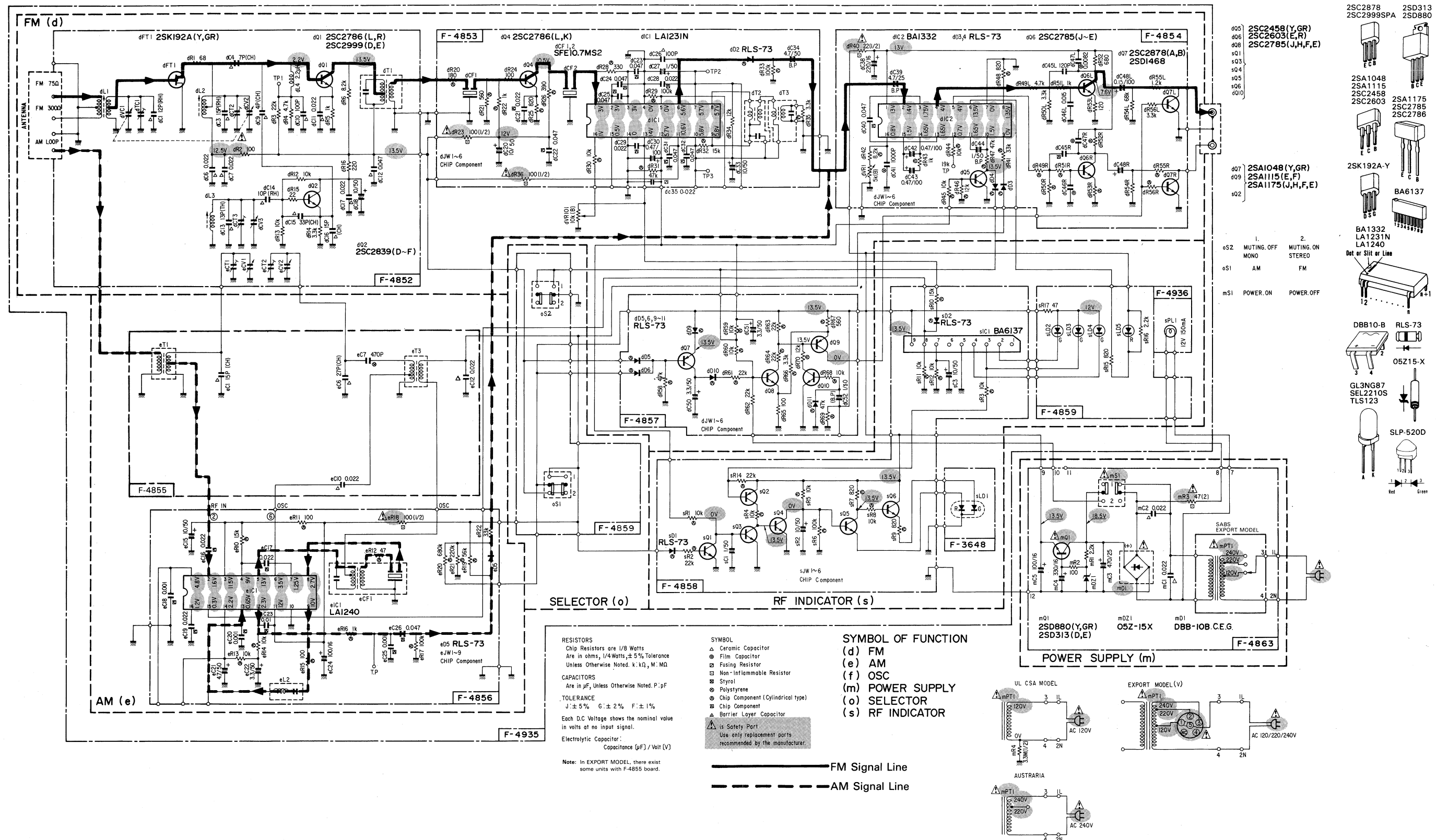
| Parts No. | Stock No. | Description |
|-----------|-----------|--------------------------------------|
| | 47759000 | Dial Scale (T-500 SA) |
| | 47759100 | Dial Scale (T-500L) |
| 12 | 47872800 | Left Side Panel Ass'y (Silver Model) |
| | 47872900 | Left Side Panel Ass'y (Black Model) |

Parts List < Top View >

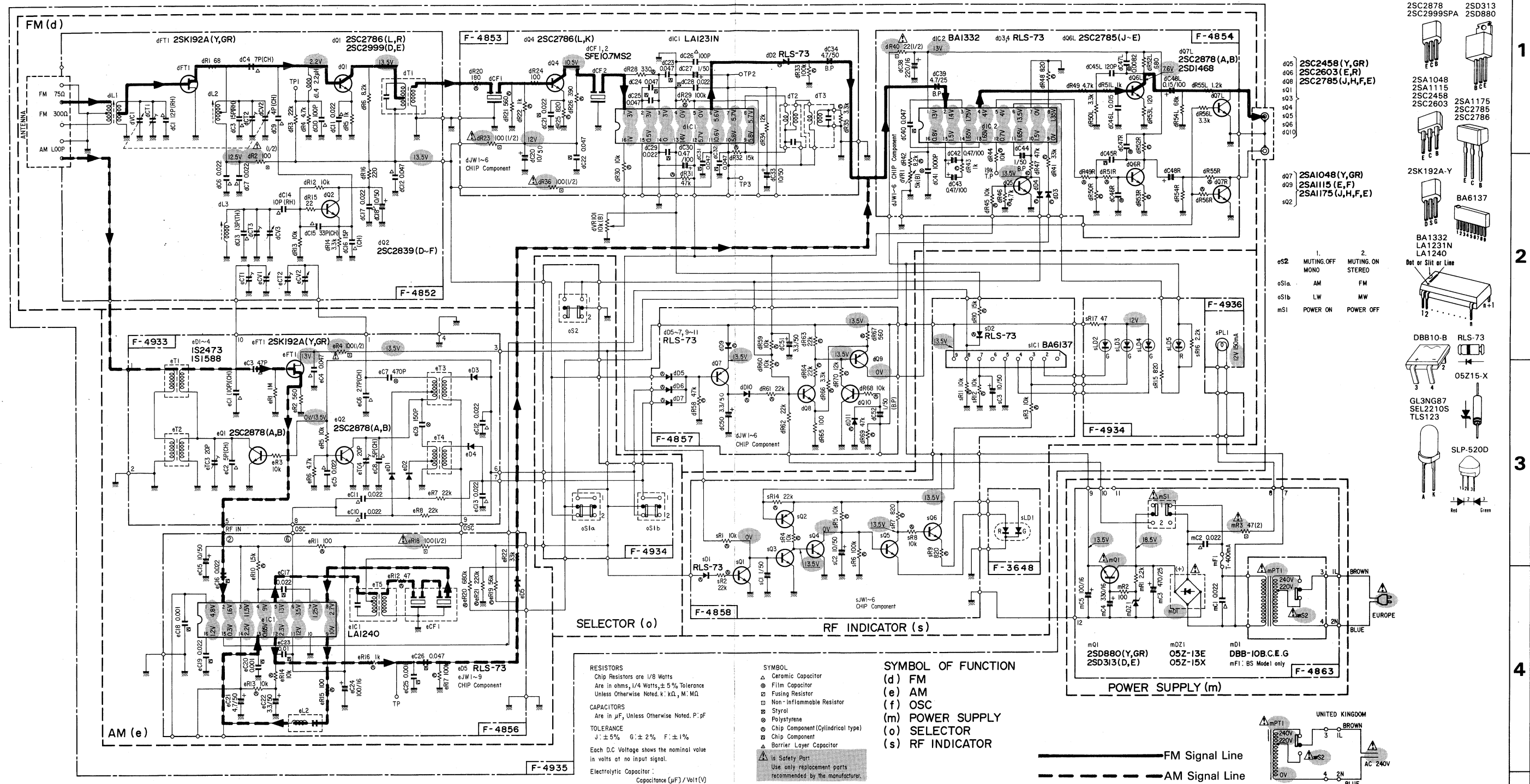
| Parts No. | Stock No. | Description |
|-----------|-----------|--|
| 1 | 47831100 | AC Cord Cover |
| △ 2 | 38005400 | Power Supply Cord (T-500 XX,XX-V,SA) |
| △ | 38004700 | Power Supply Cord (T-500 UL,CSA) |
| △ | 07204200 | Power Supply Cord (T-500 AS) |
| △ | 38004500 | Power Supply Cord (T-500L EU) |
| △ | 38004300 | Power Supply Cord (T-500L BS) |
| △ 3 | 15008101 | Power Transformer (T-500 XX,SA) |
| △ | 15020809 | Power Transformer (T-500 XX-V) |
| △ | 15008102 | Power Transformer (T-500 UL,CSA) |
| △ | 15008105 | Power Transformer (T-500 AS, T-500L EU) |
| △ | 15020806 | Power Transformer (T-500L BS) |
| △ 4 | 48175200 | Voltage Selector (T-500 XX-V) |
| △ | 07204700 | Slide SW., VOLTAGE SELECTOR (T-500L EU,BS) |
| 5 | 46438100 | 2P Terminal, OUTPUT |
| 6 | 46547300 | 4P Terminal, ANTENNA |
| 7 | 22301510 | Ground Terminal |

6. SCHEMATIC DIAGRAM 6-1. T-500

* Design and specifications subject to change without notice for improvement.
 * La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



13



7. THREADING OF DIAL CORD

- If a dial cord is cut off or slip; replace it by following procedures.
As this unit uses 0.5 mm ϕ cord, please replace it with the same type certainly.

7-1. Threading of Dial Cord

Thread the dial cord in numerical order from ① to ⑭ as Fig. 7-1.

- Close the variable capacitor completely.

Fig. 7-1

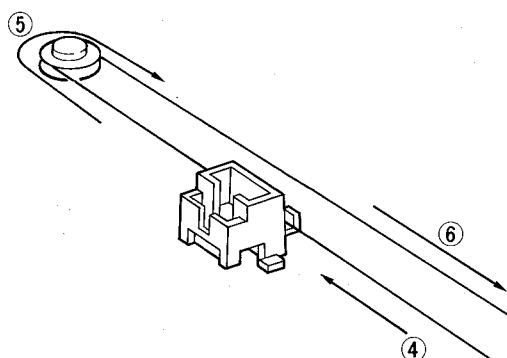
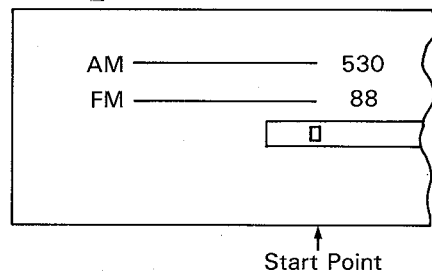


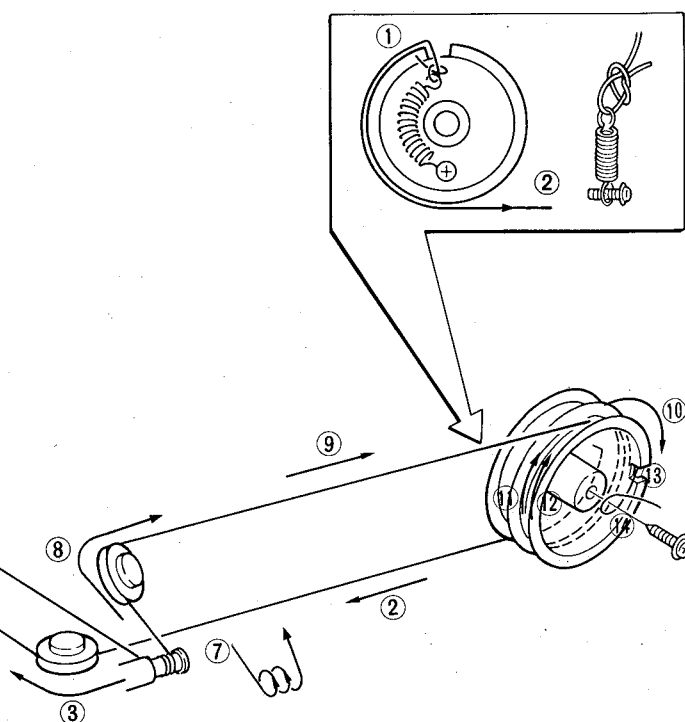
Fig. 7-2



7-2. Attachment of Dial Pointer

1. Close the variable capacitor completely.
2. Set the dial pointer to the start point, the line at the left end of the dial scale. (Fig. 7-2)

* Confirm that the dial pointer runs smoothly on the dial scale by turning the tuning shaft.

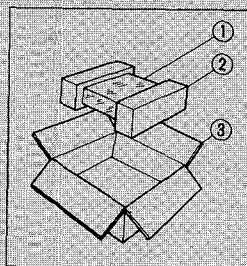


Parts List

| Stock No. | Description |
|-----------|------------------------|
| 60360530 | 0.5mm ϕ Dial Cord |
| 47747400 | Dial Pointer Holder |
| 07955700 | D35 Pulley |

8. PACKING LIST

| Parts No. | Stock No. | Description |
|-----------|-----------|--|
| 1 | 47859300 | Vinyl Bag |
| 2 | 07965300 | Styrofoam Packing |
| 3 | 47765100 | Carton Case (T-500 Silver Model XX,UL,CSA,SA,AS) |
| | 47765300 | Carton Case (T-500 Silver Model XX-V) |
| | 47765200 | Carton Case (T-500 Black Model XX,UL,CSA,SA,AS) |
| | 47765400 | Carton Case (T-500 Black Model XX-V) |
| | 47765500 | Carton Case (T-500L Silver Model) |
| | 47765600 | Carton Case (T-500L Black Model) |



9. ACCESSORY LIST

| Stock No. | Description |
|-----------|--------------------------------|
| 38103200 | PJP Cord |
| 46051700 | FM Antenna |
| 46145700 | AM Loop Antenna |
| 07563000 | Holder, AM Loop Antenna |
| 46966200 | Operating Instruction (T-500) |
| 46967100 | Operating Instruction (T-500L) |



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